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=> file biosis caba caplus embase japio lifesci medline scisearch uspatfull
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FILE 'USPATFULL' ENTERED AT 15:05:08 ON 26 JUL 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

=> e bally marcel/au
E1          28     BALLY MARC/AU
E2           1     BALLY MARC C R/AU
E3          49 --> BALLY MARCEL/AU
E4         301     BALLY MARCEL B/AU
E5           1     BALLY MARCEL BERTRAND/AU
E6           1     BALLY MARCELL B/AU
E7           2     BALLY MARTA/AU
E8           6     BALLY MATTHIAS/AU
E9           5     BALLY N/AU
E10          9     BALLY N A/AU
E11          2     BALLY NAZAR/AU
E12          7     BALLY NAZAR F/AU

=> s e1-e6 and ((lipid?)or(liposom?))
L1         288 ("BALLY MARC"/AU OR "BALLY MARC C R"/AU OR "BALLY MARCEL"/AU OR
               "BALLY MARCEL B"/AU OR "BALLY MARCEL BERTRAND"/AU OR "BALLY
              MARCELL B"/AU) AND ((LIPID?) OR(LIPOSOM?))

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2          190 DUP REM L1 (98 DUPLICATES REMOVED)

=> s l2 and metal?
L3          12 L2 AND METAL?

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 12 ANSWERS - CONTINUE? Y/(N):y

L3   ANSWER 1 OF 12  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
AN   2005:317262  BIOSIS
DN   PREV200510103201
TI   Encapsulation of doxorubicin into thermosensitive liposomes via
     complexation with the transition metal manganese.
```

AU Chiu, Gigi N. C. [Reprint Author]; Abraham, Sheela A.; Ickenstein, Ludger M.; Ng, Rebecca; Karlsson, Goran; Edwards, Katarina; Wasan, Ellen K.; Bally, Marcel B.
CS British Columbia Canc Agcy, Res Ctr, Dept Adv Therapeut, 675 W 10th Ave, Vancouver, BC V5Z 1L3, Canada
gchiu@bccrc.ca
SO Journal of Controlled Release, (MAY 18 2005) Vol. 104, No. 2, pp. 271-288. CODEN: JCREEC. ISSN: 0168-3659.
DT Article
LA English
ED Entered STN: 17 Aug 2005
Last Updated on STN: 17 Aug 2005
AB In the present study, doxorubicin was encapsulated into two thermosensitive liposome formulations which were composed of DPPC/MSPC/DSPE-PEG(2000) (90/10/4 mole ratio) or DPPC/DSPE-PEG(2000) (95/5 mole ratio). Doxorubicin loading was achieved through the use of a pH gradient or a novel procedure that involved doxorubicin complexation with manganese. Regardless of the initial drug-to-lipid ratios (D: L), the final D : L reached a maximum of 0.05 (w/w) when doxorubicin was encapsulated via a pH gradient for both then-no sensitive liposome formulations. In contrast, the final maximum D : L achieved through manganese complexation was 0.2 (w/w), and this loading method did not affect temperature-induced drug release, with 85% of drug released from MSPC-containing liposomes within 10 min at 42 degrees C but < 5% released over 60 min at 37 degrees C. When the thermosensitive liposomes prepared via the two different loading methods were injected into mice, similar plasma elimination profiles were observed. Cryo-transmission electron microscopy analysis indicated the presence of doxorubicin fiber bundles in liposomes loaded via pH gradient, compared to a stippled and diffuse morphology in those loaded via manganese complexation. To investigate the effect of intraliposomal pH on drug precipitate morphology, the A23187 ionophore (mediates Mn2+/H+ exchange) was added to liposomes loaded with doxorubicin-manganese complex, and the stippled and diffuse appearance could be converted to one exhibiting fiber bundles after acidification of the liposome core. This suggests that the formation of doxorubicin-manganese complex is favored when the intraliposomal pH is > 6.5. During the conversion to the fiber bundle morphology, no doxorubicin release was observed when A23187 was added to liposomes exhibiting a 0.05 (w/w), whereas a significant release was noted when the initial D: L was 0.2 (w/w). Following acidification of the liposomal interior and establishment of an apparent new D: L equilibrium, the measured D: L ratio was 0.05 (w/w). In conclusion, the manganese complexation loading method increased the encapsulation efficiency of doxorubicin in thermosensitive liposomes with no major impact on temperature-triggered drug release or pharmacokinetics.

L3 ANSWER 2 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2003:104441 BIOSIS
DN PREV200300104441
TI Attaching histidine-tagged peptides and proteins to lipid-based carriers through use of metal-ion-chelating lipids.
AU Chikh, Ghania G.; Li, Wai Ming; Schutze-Redelmeier, Marie-Paule; Meunier, Jean-Claude; Bally, Marcel B. [Reprint Author]
CS Department of Advanced Therapeutics, British Columbia Cancer Research Center, 600 West 10th Avenue, Vancouver, BC, V5Z 1L3, Canada
MBally@interchange.ubc.ca
SO Biochimica et Biophysica Acta, (23 December 2002) Vol. 1567, No. 1-2, pp. 204-212. print.
ISSN: 0006-3002 (ISSN print).
DT Article
LA English
ED Entered STN: 19 Feb 2003

Last Updated on STN: 19 Feb 2003

AB The therapeutic potential of selected peptides and proteins is enormous, with applications ranging from use as therapeutic vaccines, as modulators of intracellular signaling pathways and as highly selective agents capable of recognizing unique extracellular targets. We have been pursuing development of hybrid lipid-based carrier formulations designed to take advantage of the therapeutic benefits of peptides selected for their ability to act in a complementary fashion with the carrier system. In this regard, it is critical to have simple and versatile methods to promote and control the binding of diverse peptides to a broad range of carrier formulations. As demonstrated here, recombinant proteins and synthetic peptides containing poly-histidine residues (4 to 10) can be specifically bound to liposomes containing a metal -ion-chelating lipid, DOGS-NTA-Ni. The potential of this approach is demonstrated using two functional peptides, AntpHD-Cw3 (applications for vaccine production) and AHNP (specificity for Her-2 expressing cells).

L3 ANSWER 3 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

AN 2002:571798 BIOSIS

DN PREV200200571798

TI Formation of transition metal-doxorubicin complexes inside liposomes.

AU Abraham, Sheela Ann [Reprint author]; Edwards, Katarina; Karlsson, Goran; MacIntosh, Scott; Mayer, Lawrence D.; McKenzie, Cheryl; Bally, Marcel B.

CS Division of Medical Oncology, Department of Advanced Therapeutics, BC Cancer Agency, 601 West 10th Ave., Vancouver, BC, V5Z 1L3, Canada shabraham@bccancer.bc.ca

SO Biochimica et Biophysica Acta, (20 September, 2002) Vol. 1565, No. 1, pp. 41-54. print.
CODEN: BBACAQ. ISSN: 0006-3002.

DT Article

LA English

ED Entered STN: 7 Nov 2002
Last Updated on STN: 7 Nov 2002

AB Doxorubicin complexation with the transition metal manganese (Mn2+) has been characterized, differentiating between the formation of a doxorubicin-metal complex and doxorubicin fibrous-bundle aggregates typically generated following ion gradient-based loading procedures that rely on liposome encapsulated citrate or sulfate salts. The physical and chemical characteristics of the encapsulated drug were assessed using cryo-electron microscopy, circular dichroism (CD) and absorbance spectrophotometric analysis. In addition, in vitro and in vivo drug loading and release characteristics of the liposomal formulations were investigated. Finally, the internal pH after drug loading was measured with the aim of linking formation of the Mn2+ complex to the presence or absence of a transmembrane pH gradient. Doxorubicin was encapsulated into either 1,2-dimyristoyl-sn-glycero-3-phosphocholine (DMPC)/cholesterol (Chol) or 1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC)/Chol liposomes, where the entrapped salts were citrate, MnSO4 or MnCl2. In response to a pH gradient or a Mn2+ ion gradient, doxorubicin accumulated inside to achieve a drug-to-lipid ratio of approximately 0.2:1 (wt/wt). Absorbance and CD spectra of doxorubicin in the presence of Mn2+ suggested that there are two distinct structures captured within the liposomes. In the absence of added ionophore A23187, drug loading is initiated on the basis of an established pH gradient; however, efficient drug uptake is not dependent on maintenance of the pH gradient. Drug release from DMPC/Chol is comparable regardless of whether doxorubicin is entrapped as a citrate-based aggregate or a Mn2+ complex. However, in vivo drug release from DSPC/Chol liposomes indicate less than 5% or greater than 50% drug loss over a 24-h time course when the drug was encapsulated as an aggregate or a Mn2+ complex, respectively. These studies define a method for entrapping

drugs possessing coordination sites capable of complexing transition metals and suggest that drug release is dependent on lipid composition, internal pH, as well as the nature of the crystalline precipitate, which forms following encapsulation.

L3 ANSWER 4 OF 12 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 1997:484360 BIOSIS
DN PREV199799783563
TI Influence of pH gradients on the transbilayer transport of drugs, lipids, peptides and metal ions into large unilamellar vesicles.
AU Cullis, Pieter R. [Reprint author]; Hope, Michael J.; Bally, Marcel B.; Madden, Thomas D.; Mayer, Lawrence D.; Fenske, David B.
CS Dep. Biochem. and Molecular Biol., Univ. B.C., Vancouver, BC V6T 1Z3, Canada
SO Biochimica et Biophysica Acta, (1997) Vol. 1331, No. 2, pp. 187-211. CODEN: BBACAQ. ISSN: 0006-3002.
DT Article
General Review; (Literature Review)
LA English
ED Entered STN: 7 Nov 1997
Last Updated on STN: 7 Nov 1997

L3 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:857369 CAPLUS
DN 141:337757
TI Administration of effective amts. of fluoropyrimidine/camptothecin drug combinations using liposomal drug delivery vehicles
IN Mayer, Lawrence; Bally, Marcel; Webb, Murray; Tardi, Paul; Johnstone, Sharon
PA Celator Technologies Inc., Can.
SO PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004087115	A2	20041014	WO 2004-CA507	20040402
	WO 2004087115	A3	20041125		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004226889	A1	20041014	AU 2004-226889	20040402
	CA 2536612	AA	20041014	CA 2004-2536612	20040402
	US 2004265368	A1	20041230	US 2004-817735	20040402
	EP 1608337	A2	20051228	EP 2004-725253	20040402
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
	CN 1798544	A	20060705	CN 2004-80012351	20040402
PRAI	US 2003-460169P	P	20030402		
	WO 2004-CA507	W	20040402		

AB The present invention relates to compns. and methods for administering effective amts. of fluoropyrimidine/camptothecin drug combinations using liposomal vehicles that are stably associated with at least one fluoropyrimidine and one water-soluble camptothecin. These compns. allow the

two or more agents to be delivered to the disease site in a coordinated fashion, thereby assuring that the agents will be present at the disease site at a desired ratio.

L3 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:88609 CAPLUS
DN 141:145470
TI In Vitro and in Vivo Characterization of Doxorubicin and Vincristine Coencapsulated within Liposomes through Use of Transition Metal Ion Complexation and pH Gradient Loading
AU Abraham, Sheela A.; McKenzie, Cheryl; Masin, Dana; Ng, Rebecca; Harasym, Troy O.; Mayer, Lawrence D.; Bally, Marcel B.
CS Department of Advanced Therapeutics, Division of Medical Oncology, BC Cancer Agency, University of British Columbia, Vancouver, BC, V5Z 1L3, Can.
SO Clinical Cancer Research (2004), 10(2), 728-738
CODEN: CCREF4; ISSN: 1078-0432
PB American Association for Cancer Research
DT Journal
LA English
AB PURPOSE: There is an opportunity to augment the therapeutic potential of drug combinations through use of drug delivery technol. This report summarizes data obtained using a novel liposomal formulation with coencapsulated doxorubicin and vincristine. The rationale for selecting these drugs is due in part to the fact that liposomal formulations of doxorubicin and vincristine are being sep. evaluated as components of drug combinations. EXPTL. DESIGN: Doxorubicin and vincristine were coencapsulated into liposomes using two distinct methods of drug loading. A manganese-based drug loading procedure, which relies on drug complexation with a transition metal, was used to encapsulate doxorubicin. Subsequently the ionophore A23187 was added to induce formation of a pH gradient, which promoted vincristine encapsulation. RESULTS: Plasma elimination studies in mice indicated that the drug:drug ratio before injection [4:1 doxorubicin:vincristine (weight:weight ratio)] changed to 20:1 at the 24-h time point, indicative of more rapid release of vincristine from the liposomes than doxorubicin. Efficacy studies completed in MDA MB-435/LCC6 tumor-bearing mice suggested that at the maximum tolerated dose, the coencapsulated formulation was therapeutically no better than liposomal vincristine. This result was explained in part by in vitro cytotoxicity studies evaluating doxorubicin and vincristine combinations analyzed using the Chou and Talalay median effect principle. These data clearly indicated that simultaneous addition of vincristine and doxorubicin resulted in pronounced antagonism. CONCLUSION: These results emphasize that in vitro drug combination screens can be used to predict whether a coformulated drug combination will act in an antagonistic or synergistic manner.
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:282371 CAPLUS
DN 138:292792
TI Liposome loading with metal ions
IN Tardi, Paul; Johnstone, Sharon; Webb, Murray; Bally, Marcel; Abraham, Sheela
PA Celator Technologies Inc., Can.
SO PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2003028697 A2 20030410 WO 2002-CA1501 20021003
WO 2003028697 A3 20030530
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
CA 2462376 AA 20030410 CA 2002-2462376 20021003
US 2003091621 A1 20030515 US 2002-264818 20021003
EP 1432403 A2 20040630 EP 2002-766998 20021003
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
JP 2005508921 T2 20050407 JP 2003-532030 20021003
TW 235066 B1 20050701 TW 2002-91122851 20021003
PRAI US 2001-326671P P 20011003
US 2001-341529P P 20011217
US 2002-356759P P 20020215
US 2002-362074P P 20020307
US 2002-394273P P 20020709
WO 2002-CA1501 W 20021003
AB This invention relates to encapsulation of drugs and other agents into liposomes comprising: (i) preparing a liposome containing an encapsulated transition metal ion, (ii) adding one or more therapeutic agents to the external solution, and (iii) maintaining the agent in the external solution for sufficient time to load the agent into the liposome. The transition metal ions are selected from Fe, Co, Ni, Cu, Zn, V, Ti, Cr, Rh, Ru, Mo, and Pd. For example, copper loading of epirubicin into DSPC/DSPE/PEG2000 (95:5 molar ratio) liposomes was presented. The loading of epirubicin into liposomes resulted in >95% drug accumulation within 5 min when uptake occurred at 60°.

L3 ANSWER 8 OF 12 USPATFULL on STN
AN 2005:68559 USPATFULL
TI Cell penetrating therapeutic agents
IN Bally, Marcel, Bowen Island, CANADA
Schultze-Redelmeier, Marie-Paul, Vancouver, CANADA
Chikh, Ghania, Vancouver, CANADA
PI US 2005058697 A1 20050317
AI US 2003-727017 A1 20031202 (10)
RLI Continuation of Ser. No. WO 2002-CA853, filed on 7 Jun 2002, UNKNOWN
PRAI US 2001-296158P 20010607 (60)
DT Utility
FS APPLICATION
LREP MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE, SUITE 500, SAN DIEGO, CA, 92130-2332
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 996
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions are provided for delivery of a biologically active agent to a cell, comprising a vehicle having the formula:

A-(BC)

wherein:

A is a lipid-based vehicle;

B is a moiety comprising an internalizing peptide;

C is a moiety comprising a biologically active agent;

(BC) is a complex comprising B and C in which B is conjugated to C; and,

A is conjugated to (BC).

L3 ANSWER 9 OF 12 USPATFULL on STN
AN 2004:334290 USPATFULL
TI Combination compositions of camptothecins and fluoropyrimidines
IN Mayer, Lawrence, North Vancouver, CANADA
Bally, Marcel, Bowen Island, CANADA
Webb, Murray, North Vancouver, CANADA
Tardi, Paul, Surrey, CANADA
Johnstone, Sharon, Vancouver, CANADA
PI US 2004265368 A1 20041230
AI US 2004-817735 A1 20040402 (10)
PRAI US 2003-460169P 20030402 (60)
DT Utility
FS APPLICATION
LREP MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE, SUITE 500, SAN DIEGO, CA, 92130-2332
CLMN Number of Claims: 33
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 1655
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions which comprise liposomes having stably associated therewith a camptothecin and a fluoropyrimidine are useful in achieving enhanced therapeutic effects when combinations of these drugs are administered.

L3 ANSWER 10 OF 12 USPATFULL on STN
AN 2003:133536 USPATFULL
TI Liposome loading with metal ions
IN Tardi, Paul, Surrey, CANADA
Johnstone, Sharon, Vancouver, CANADA
Webb, Murray, North Vancouver, CANADA
Bally, Marcel, Bowen Island, CANADA
Abraham, Sheela, Vancouver, CANADA
PI US 2003091621 A1 20030515
AI US 2002-264818 A1 20021003 (10)
PRAI US 2001-326671P 20011003 (60)
US 2001-341529P 20011217 (60)
US 2002-356759P 20020215 (60)
US 2002-362074P 20020307 (60)
US 2002-394273P 20020709 (60)
DT Utility
FS APPLICATION
LREP Kate H. Murashige, Morrison & Foerster LLP, Suite 500, 3811 Valley Centre Drive, San Diego, CA, 92130-2332
CLMN Number of Claims: 43
ECL Exemplary Claim: 1
DRWN 24 Drawing Page(s)
LN.CNT 1989
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to encapsulation of drugs and other agents into liposomes.

L3 ANSWER 11 OF 12 USPATFULL on STN
AN 2002:337293 USPATFULL
TI Method of preventing aggregation of a lipid: nucleic acid

complex
IN Wheeler, Jeffrey, Surrey, CANADA
Bally, Marcel B., Bowen Island, CANADA
Zhang, Yuan-Peng, Sunnyvale, CA, UNITED STATES
Reimer, Dorothy L., Vancouver, CANADA
Hope, Michael, Vancouver, CANADA
PI US 2002192651 A1 20021219
US 6858224 B2 20050222
AI US 2001-875805 A1 20010605 (9)
RLI Continuation of Ser. No. US 1999-431594, filed on 1 Nov 1999, PENDING
Continuation of Ser. No. US 2000-566700, filed on 8 May 2000, PENDING
Continuation of Ser. No. US 1996-660025, filed on 6 Jun 1996, GRANTED, Pat. No. US 5976567 Continuation-in-part of Ser. No. US 1995-485458, filed on 7 Jun 1995, GRANTED, Pat. No. US 5705385 Continuation-in-part of Ser. No. US 1995-484282, filed on 7 Jun 1995, GRANTED, Pat. No. US 5981501
DT Utility
FS APPLICATION
LREP OPPEDAHL AND LARSON LLP, P O BOX 5068, DILLON, CO, 80435-5068
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 35 Drawing Page(s)
LN.CNT 3062
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Particle aggregation of lipid:nucleic acid complex particles is prevented by incorporating a non-cationic lipid into lipid:nucleic acid complex particles containing a cationic lipid and a nucleic acid polymer. The non-cationic lipid is a polyethylene glycol-based polymer.

L3 ANSWER 12 OF 12 USPATFULL on STN
AN 95:36185 USPATFULL
TI Liposomes comprising aminoglycoside phosphates and methods of production and use
IN Bally, Marcel B., Vancouver, Canada
Bolcsak, Lois E., Lawrenceville, NJ, United States
Cullis, Pieter R., Vancouver, Canada
Janoff, Andrew S., Yardley, PA, United States
Mayer, Lawrence D., Vancouver, Canada
PA The Liposome Company, Inc., Princeton, NJ, United States (U.S. corporation)
PI US 5409704 19950425
AI US 1993-59192 19930506 (8)
DCD 20071204
RLI Continuation of Ser. No. US 1990-537160, filed on 15 May 1990, now abandoned which is a continuation of Ser. No. US 1986-946391, filed on 23 Dec 1986, now abandoned which is a continuation-in-part of Ser. No. US 1985-800545, filed on 21 Nov 1985, now abandoned which is a continuation-in-part of Ser. No. US 1985-752423, filed on 5 Jul 1985, now abandoned which is a continuation-in-part of Ser. No. US 1985-749161, filed on 26 Jun 1985, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Lovering, Richard D.
LREP Rubin, Kenneth B.
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 905
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Aminoglycosides, analogs and derivatives thereof, in the form of phosphate salts are described as well as the process for making and utilizing same. Aminoglycoside phosphate liposomes and nonguanadino aminoglycoside phosphate liposomes, their

preparation and use, are particularly described.

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=> e shultze redelmeier marie paul/au
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E2            2     SHULTZE R/AU
E3            0 --> SHULTZE REDELMEIER MARIE PAUL/AU
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E6            1     SHULTZE WERNINGHAUS G/AU
E7            2     SHULTZER M/AU
E8            6     SHULTZEV G P/AU
E9            1     SHULTZEWERNINGHAUS G/AU
E10           1     SHULTZSIBBEL G M W/AU
E11           1     SHULTZT S J/AU
E12           1     SHULUDKO G S/AU

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E12           1     RELER R A/AU

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E5          432     REDELMEIER D A/AU
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E12           1     REDELMEIER ROBERT J/AU

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L4            1 "REDELMEIER MARIE PAULE"/AU

=> d

L4   ANSWER 1 OF 1  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
AN   2001:468699  BIOSIS
DN   PREV200100468699
TI   Efficient CTL priming in mice by liposomal vaccine: Liposomes deliver
     exogenous recombinant protein into the MHC class I processing pathway.
AU   Chikh, Ghania [Reprint author]; Bally, Marcel B. [Reprint author];
     Redelmeier, Marie-Paule [Reprint author]
CS   British Columbia Cancer Research Center, Vancouver, BC, Canada
SO   Proceedings of the American Association for Cancer Research Annual
     Meeting, (March, 2001) Vol. 42, pp. 276. print.
     Meeting Info.: 92nd Annual Meeting of the American Association for Cancer
     Research. New Orleans, LA, USA. March 24-28, 2001.
     ISSN: 0197-016X.
DT   Conference; (Meeting)
```

Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 3 Oct 2001
Last Updated on STN: 23 Feb 2002

=> e chikh ghania/au
E1 18 CHIKH G/AU
E2 7 CHIKH G G/AU
E3 19 --> CHIKH GHANIA/AU
E4 5 CHIKH GHANIA G/AU
E5 1 CHIKH I D/AU
E6 5 CHIKH I V/AU
E7 1 CHIKH ISSA A/AU
E8 13 CHIKH ISSA A R/AU
E9 2 CHIKH ISSA ABDUL R/AU
E10 1 CHIKH ISSA ABDUL RAZAK/AU
E11 15 CHIKH K/AU
E12 14 CHIKH KARIM/AU

=> s e1-e4 and ((lipid?)or(liposom?))
L5 40 ("CHIKH G"/AU OR "CHIKH G G"/AU OR "CHIKH GHANIA"/AU OR "CHIKH GHANIA G"/AU) AND ((LIPID?) OR(LIPOSOM?))

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 18 DUP REM L5 (22 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 18 ANSWERS - CONTINUE? Y/(N):y

L6 ANSWER 1 OF 18 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1
AN 2006:323410 BIOSIS
DN PREV200600316772
TI Methods for the preparation of protein-oligonucleotide-lipid constructs.
AU Takasaki, Jennifer; Raney, Sameersingh G.; Chikh, Ghania; Sekirov, Laura; Brodsky, Irina; Tam, Ying; Ansell, Steven M. [Reprint Author]
CS Inex Pharmaceut Corp, 100-8900 Glenlyon Pkwy, Burnaby, BC V5J 5J8, Canada
ansell2010@shaw.ca
SO Bioconjugate Chemistry, (MAR-APR 2006) Vol. 17, No. 2, pp. 451-458.
CODEN: BCCHES. ISSN: 1043-1802.
DT Article
LA English
ED Entered STN: 21 Jun 2006
Last Updated on STN: 21 Jun 2006
AB A mixture of ionizable cationic lipids, steric barrier lipids, and colipids is used to encapsulate oligonucleotide DNA in lipidic particles called SALP. This material is under development as an adjuvant for vaccines. Previously we have shown that coupling the antigen directly to the surface of SALP can lead to enhanced immunological responses in vivo. Two different methods for preparing ovalbumin-SALP were assessed in this work. Originally the conjugates were prepared by treating SALP containing a maleimide-dedvatized lipid with thiolated ovalbumin, a method we refer to as active coupling. This reaction was found to be difficult to control and generally resulted in low coupling efficiencies. The issues relating to this approach were characterized. We have recently developed alternative techniques based on first coupling ovalbumin to a micelle and then incubating the resultant product with SALP, methods we refer to as passive coupling. We have shown that this method allows accurate control of the levels of protein associated SALP and does not suffer from surface saturation effects seen

with the active coupling method that places maximum limits on the amount of protein that can be coupled to the SALP surface. The products from the passive coupling protocol are shown to have activity comparable to those derived from the active coupling protocol in investigations of in vivo immune responses.

L6 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:346879 CAPLUS
DN 142:404243
TI Methods and compositions for enhancing innate immunity and antibody dependent cellular cytotoxicity
IN Tam, Ying K.; Chikh, Ghania; Sekirov, Laura; Brodsky, Irina; Raney, Sameersingh G.
PA Inex Pharmaceuticals Corporation, Can.
SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005034979	A2	20050421	WO 2004-IB3317	20041011
	WO 2005034979	A3	20050602		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004280143	A1	20050421	AU 2004-280143	20041011
	CA 2542099	AA	20050421	CA 2004-2542099	20041011
	EP 1675614	A2	20060705	EP 2004-769609	20041011
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	US 2005191342	A1	20050901	US 2004-963999	20041012
PRAI	US 2003-510799P	P	20031011		
	US 2004-542754P	P	20040206		
	US 2004-616161P	P	20041004		
	WO 2004-IB3317	W	20041011		

OS MARPAT 142:404243
AB Cationic liposomes with immunostimulatory nucleic acids are shown to stimulate the innate immune response, and synergistic combinations of such liposomal nucleic acids and therapeutic antibodies are provided to dramatically improve antibody dependent cellular cytotoxicity and target cell lysis.

L6 ANSWER 3 OF 18 USPATFULL on STN
AN 2005:220607 USPATFULL
TI Methods and compositions for enhancing innate immunity and antibody dependent cellular cytotoxicity
IN Tam, Ying K., Vancouver, CANADA
Chikh, Ghania, Vancouver, CANADA
Sekirov, Laura, Richmond, CANADA
Brodsky, Irina, Vancouver, CANADA
Raney, Sameersingh G., Vancouver, CANADA
PA Inex Pharmaceuticals Corporation (non-U.S. corporation)
PI US 2005191342 A1 20050901
AI US 2004-963999 A1 20041012 (10)
PRAI US 2004-616161P 20041004 (60)

US 2004-542754P 20040206 (60)
US 2003-510799P 20031011 (60)
DT Utility
FS APPLICATION
LREP Todd A. Lorenz, Dorsey & Whitney LLP, Intellectual Property Department, Four Embarcadero Center, Suite 3400, San Francisco, CA, 94111-4187, US
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 24 Drawing Page(s)
LN.CNT 2929
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cationic liposomes with immunostimulatory nucleic acids are shown to stimulate the innate immune response, and synergistic combinations of such liposomal nucleic acids and therapeutic antibodies are provided to dramatically improve antibody dependent cellular cytotoxicity and target cell lysis.

L6 ANSWER 4 OF 18 USPATFULL on STN
AN 2005:68559 USPATFULL
TI Cell penetrating therapeutic agents
IN Bally, Marcel, Bowen Island, CANADA
Schultze-Redelmeier, Marie-Paul, Vancouver, CANADA
Chikh, Ghania, Vancouver, CANADA
PI US 2005058697 A1 20050317
AI US 2003-727017 A1 20031202 (10)
RLI Continuation of Ser. No. WO 2002-CA853, filed on 7 Jun 2002, UNKNOWN
PRAI US 2001-296158P 20010607 (60)
DT Utility
FS APPLICATION
LREP MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE, SUITE 500, SAN DIEGO, CA, 92130-2332
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 996
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions are provided for delivery of a biologically active agent to a cell, comprising a vehicle having the formula:

A-(BC)

wherein:

A is a lipid-based vehicle;

B is a moiety comprising an internalizing peptide;

C is a moiety comprising a biologically active agent;

(BC) is a complex comprising B and C in which B is conjugated to C; and,

A is conjugated to (BC).

L6 ANSWER 5 OF 18 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 2
AN 2005:534759 BIOSIS
DN PREV200510320262
TI Liposomal encapsulation enhances uptake by APCs and potentiates immumostimulatory activity of synthetic methylated CpG ODN.
AU Tam, Ying [Reprint Author]; Dean-deJong, Sue G.; Sekirov, Laura L.; Raney, Sameersingh G.; Chikh, Ghania G.
CS Inex Pharmaceut Corp, Burnaby, BC V5J 5J8, Canada
SO FASEB Journal, (MAR 7 2005) Vol. 19, No. 5, Suppl. S, Part 2, pp. A1407.
Meeting Info.: Experimental Biology 2005 Meeting/35th International

Congress of Physiological Sciences. San Diego, CA, USA. March 31 -April 06, 2005. Amer Assoc Anatomists; Amer Assoc Immunologists; Amer Physiol Soc; Amer Soc Biochem & Mol Biol; Amer Soc Investigat Pathol; Amer Soc Nutr Sci; Amer Soc Pharmacol & Expt Therapeut; Int Union Physiol Sci. CODEN: FAJOEC. ISSN: 0892-6638.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 1 Dec 2005
Last Updated on STN: 1 Dec 2005

AB Vertebrates have evolved mechanisms to rapidly respond to pathogens by recognizing pathogen-associated molecular patterns of which bacterial DNA or oligonucleotide (ODN) analogs containing unmethylated CpG is an example. They interactwith toll-like receptor 9 (TLR9) and trigger vigorous immune responses. It isgenerally accepted that methylation abrogates activity by preventing interaction with TLR9. We have previously shown that liposomal encapsulation of CpG ODN enhances immunopotency and we report here that liposomally -encapsulated ODN containing methylated CpG motifs (L-mCpG ODN) are also potent immunostimulators. They induce immune responses and anti-tumor activity that are equal or superior to equivalent unmethylated forms as judged by cell activation, MHC-tetramer, cytotoxicity and protection in animal models. Encapsulation significantly enhances targeting/uptake by CD11b+ and CD11c+ antigen presenting cells (APCs;monocytes/macrophages and dendritic cells or DCs respectively) resulting in enhanced activation and cytokine secretion. Data showing TLR9 upregulation in response to L-mCpG ODN suggests that CpG and mCpG ODN share a common signaling pathway. Interestingly, while CD11b+ APCs respond similarly to encapsulated CpG and mCpG ODN, CD11c+ DCs appear to be particularly sensitive to L-mCpG ODN, exhibiting enhanced activation and cytokine secretion. In summary, liposomal encapsulation endows mCpG ODN with potent immunostimulatory activity and that targeted delivery to APCs results in enhanced immunopotency. Finally, superior activity of L-mCp6 ODN may reside in CD11c+ DCs.

L6 ANSWER 6 OF 18 USPATFULL on STN

AN 2004:18347 USPATFULL

TI Cancer vaccines and methods of using the same

IN Tam, Ying Kee, Vancouver, CANADA
Semple, Sean C., Vancouver, CANADA
Klimuk, Sandra K., Vancouver, CANADA
Chikh, Ghania, Vancouver, CANADA

PA Inex Pharmaceuticals Corporation (non-U.S. corporation)

PI US 2004013649 A1 20040122

AI US 2003-437258 A1 20030512 (10)

PRAI US 2003-460646P 20030404 (60)
US 2003-454298P 20030312 (60)
US 2002-379343P 20020510 (60)

DT Utility

FS APPLICATION

LREP Todd A. Lorenz, Dorsey & Whitney LLP, Four Embarcadero Center, Suite 3400, San Francisco, CA, 94111

CLMN Number of Claims: 30

ECL Exemplary Claim: 1

DRWN 46 Drawing Page(s)

LN.CNT 3119

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention discloses cancer vaccines comprising lipid -nucleic acid formulations in combination with one or more tumor-associated antigens which are capable of stimulating strong, Th-1 biased cellular immune responses to said tumor-associated antigens in vivo. It is further disclosed the subject cancer vaccines provide therapeutic efficacy in treating tumors in an animal.

L6 ANSWER 7 OF 18 USPATFULL on STN
AN 2004:13422 USPATFULL
TI Methylated immunostimulatory oligonucleotides and methods of using the same
IN Tam, Ying Kee, Vancouver, CANADA
Semple, Sean C., Vancouver, CANADA
Klimuk, Sandra K., Vancouver, CANADA
Chikh, Ghania, Vancouver, CANADA
PA Inex Pharmaceuticals Corporation (non-U.S. corporation)
PI US 2004009944 A1 20040115
AI US 2003-437275 A1 20030512 (10)
PRAI US 2002-379343P 20020510 (60)
US 2003-460646P 20030404 (60)
DT Utility
FS APPLICATION
LREP Todd A. Lorenz, Dorsey & Whitney LLP, Suite 3400, Four Embarcadero Center, San Francisco, CA, 94111
CLMN Number of Claims: 44
ECL Exemplary Claim: 1
DRWN 34 Drawing Page(s)
LN.CNT 2991
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention discloses that methylated nucleic acids, particularly methylated oligonucleotides, and more particularly methylated oligonucleotides bearing a methylated cytosine of a CpG dinucleotide motif can be made immunostimulatory in vivo, by encapsulation of the nucleic acid in a lipid particle. It is further disclosed that encapsulated methylated nucleic acids that are ordinarily not immunostimulatory in vivo are as effective or even more effective than their encapsulated unmethylated counterparts. Also disclosed are methods for activating and/or expanding dendritic cell populations in response to antigenic stimulation using the compositions and methods disclosed herein.

L6 ANSWER 8 OF 18 USPATFULL on STN
AN 2004:13421 USPATFULL
TI Pathogen vaccines and methods for using the same
IN Semple, Sean C., Vancouver, CANADA
Tam, Ying Kee, Vancouver, CANADA
Chikh, Ghania, Vancouver, CANADA
Hope, Michael J., Vancouver, CANADA
PA Inex Pharmaceuticals Corporation (non-U.S. corporation)
PI US 2004009943 A1 20040115
AI US 2003-437263 A1 20030512 (10)
PRAI US 2003-460646P 20030404 (60)
US 2003-454298P 20030312 (60)
US 2002-379343P 20020510 (60)
DT Utility
FS APPLICATION
LREP Todd A. Lorenz, Dorsey & Whitney LLP, Suite 3400, Four Embarcadero Center, San Francisco, CA, 94111
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 52 Drawing Page(s)
LN.CNT 3700
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention is based on the discovery that vaccines against pathogens, exemplified herein by hepatitis B, can be formulated to enhance stimulation of Th1 type humoral and cellular immune responses by combining a lipid particle with an encapsulated immunostimulatory oligonucleotide (LNA). The LNA is further associated with an antigen from the pathogen. The vaccines may also use two or more different epitopes from the same antigen, or different antigens from the pathogen. Such vaccines are particularly effective in enhancing a Th1

type humoral response when the antigen is coupled to the lipid nucleic acid particle and when the nucleic acid particle has phosphorothioate (PS) backbone. An enhanced humoral response is demonstrated, for example, by a strong early peak of IFN-gamma production observed within hours of vaccination followed by second stronger peak of IFN-gamma production observed several days later, correlated with antibody isotype switching.

L6 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:913036 CAPLUS
DN 139:394872
TI Lipid-methylated CpG-containing nucleic acids for expansion or activation of dendritic cells or antigen-presenting cells and as vaccine adjuvant
IN Tam, Ying K.; Semple, Sean; Klimuk, Sandra; Chikh, Ghania
PA Inex Pharmaceuticals Corporation, Can.
SO PCT Int. Appl., 102 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003094963	A2	20031120	WO 2003-CA678	20030512
	WO 2003094963	A3	20040212		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003125292	A1	20030703	US 2002-290545	20021107
	AU 2003229433	A1	20031111	AU 2003-229433	20030512
	CA 2485400	AA	20031120	CA 2003-2485400	20030512
	US 2004009943	A1	20040115	US 2003-437263	20030512
	US 2004009944	A1	20040115	US 2003-437275	20030512
	US 2004013649	A1	20040122	US 2003-437258	20030512
	EP 1506010	A2	20050216	EP 2003-722133	20030512
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1665531	A	20050907	CN 2003-816229	20030512
	JP 2005532315	T2	20051027	JP 2004-503046	20030512
PRAI	US 2002-379343P	P	20020510		
	US 2002-290545	A	20021107		
	US 2003-460646P	P	20030404		
	US 1999-151211P	P	19990827		
	US 2000-176406P	P	20000113		
	US 2000-649527	A	20000828		
	US 2001-337522P	P	20011107		
	US 2003-454298P	P	20030312		
	WO 2003-CA678	W	20030512		

AB The invention discloses that methylated nucleic acids, particularly methylated oligonucleotides, and more particularly methylated oligonucleotides bearing a methylated cytosine of a CpG dinucleotide motif can be made immunostimulatory in vivo, by encapsulation of the nucleic acid in a lipid particle. It is further disclosed that encapsulated methylated nucleic acids that are ordinarily not immunostimulatory in vivo are as effective or even more effective than their encapsulated unmethylated counterparts. Also disclosed are methods for activating and/or expanding dendritic cell populations in response to

antigenic stimulation using the compns. and methods disclosed herein.

L6 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:912933 CAPLUS
DN 139:394870
TI Liposome-encapsulated immunostimulatory oligonucleotides enhance immune response to vaccination
IN Semple, Sean; Chikh, Ghania; Hope, Michael J.; Tam, Ying K.
PA Inex Pharmaceuticals Corporation, Can.
SO PCT Int. Appl., 138 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003094829	A2	20031120	WO 2003-CA680	20030512
	WO 2003094829	A3	20040205		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003125292	A1	20030703	US 2002-290545	20021107
	AU 2003229435	A1	20031111	AU 2003-229435	20030512
	CA 2485256	AA	20031120	CA 2003-2485256	20030512
	US 2004009943	A1	20040115	US 2003-437263	20030512
	US 2004013649	A1	20040122	US 2003-437258	20030512
	EP 1505942	A2	20050216	EP 2003-722135	20030512
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2005525414	T2	20050825	JP 2004-502918	20030512
PRAI	US 2002-379343P	P	20020510		
	US 2002-290545	A	20021107		
	US 2003-454298P	P	20030312		
	US 1999-151211P	P	19990827		
	US 2000-176406P	P	20000113		
	US 2000-649527	A	20000828		
	US 2001-337522P	P	20011107		
	US 2003-460646P	P	20030404		
	WO 2003-CA680	W	20030512		

AB The authors disclose that vaccines against pathogens, exemplified herein by hepatitis B, can be formulated to enhance stimulation of Th1 type humoral and cellular immune responses by combining a lipid particle with an encapsulated immunostimulatory oligonucleotide (LNA). The LNA is further associated with an antigen from the pathogen. The vaccines may also use two or more different epitopes from the same antigen, or different antigens from the pathogen. Such vaccines are particularly effective in enhancing a Th1 type humoral response when the antigen is coupled to the lipid nucleic acid particle and when the nucleic acid particle has phosphorothioate (PS) backbone. An enhanced humoral response is demonstrated, for example, by a strong early peak of IFN-γ production observed within hours of vaccination followed by second stronger peak of IFN-γ production observed several days later, correlated with antibody isotype switching.

L6 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:912932 CAPLUS
DN 139:394869

TI Cancer vaccines and methods of using the same
IN Tam, Ying K.; Semple, Sean; Klimuk, Sandra; Chikh, Ghania
PA Inex Pharmaceuticals Corporation, Can.
SO PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 10

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003094828	A2	20031120	WO 2003-CA679	20030512
	WO 2003094828	A3	20040205		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003125292	A1	20030703	US 2002-290545	20021107
	AU 2003229434	A1	20031111	AU 2003-229434	20030512
	CA 2484266	AA	20031120	CA 2003-2484266	20030512
	US 2004009943	A1	20040115	US 2003-437263	20030512
	US 2004009944	A1	20040115	US 2003-437275	20030512
	US 2004013649	A1	20040122	US 2003-437258	20030512
	EP 1503793	A2	20050209	EP 2003-722134	20030512
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1665531	A	20050907	CN 2003-816229	20030512
	JP 2005530761	T2	20051013	JP 2004-502917	20030512
PRAI	US 2002-379343P	P	20020510		
	US 2002-290545	A	20021107		
	US 2003-460646P	P	20030404		
	US 1999-151211P	P	19990827		
	US 2000-176406P	P	20000113		
	US 2000-649527	A	20000828		
	US 2001-337522P	P	20011107		
	US 2003-454298P	P	20030312		
	WO 2003-CA679	W	20030512		

AB The authors disclose lipid-oligodeoxynucleotide formulations which, in combination with one or more tumor-associated antigens (TAA), are capable of stimulating strong, Th1 cell-biased immune responses to TAA in vivo. In one example, an enhanced cytotoxic T-cell response against melanoma was elicited by liposome-encapsulated immunostimulatory oligodeoxynucleotides formulated with peptides derived from TRP-2 and gp100.

L6 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:946146 CAPLUS
DN 138:29106
TI Cell penetrating therapeutic agents
IN Bally, Marcel B.; Schutze-Redelmeier, Marie-Paul; Chikh, Ghania
PA Celator Technologies, Inc., Can.
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002098465	A2	20021212	WO 2002-CA853	20020607

WO 2002098465 A3 20030717
WO 2002098465 B1 20030912
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
CA 2449873 AA 20021212 CA 2002-2449873 20020607
EP 1399191 A2 20040324 EP 2002-734951 20020607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
US 2005058697 A1 20050317 US 2003-727017 20031202
PRAI US 2001-296158P P 20010607
WO 2002-CA853 W 20020607

AB Compns. are provided for delivery of a biol. active agent to a cell, comprising a vehicle having the formula: A-(BC) wherein: A is a lipid-based vehicle; B is a moiety comprising an internalizing peptide; C is a moiety comprising a biol. active agent; (BC) is a complex comprising B and C in which B is conjugated to C; and A is conjugated to (BC).

L6 ANSWER 13 OF 18 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 3

AN 2003:15698 BIOSIS
DN PREV200300015698
TI Liposomal delivery of CTL epitopes to dendritic cells.
AU Chikh, Ghania; Schutze-Redelmeier, Marie-Paule [Reprint Author]
CS Systemic Therapy Program, Advanced Therapeutics, Dept of Advanced Therapeutics, British Columbia Cancer Research Center, 601 West 10th Avenue, Vancouver, BC, V5Z 1L3, Canada
mpredelm@bccancer.bc.ca
SO Bioscience Reports, (April 2002) Vol. 22, No. 2, pp. 339-353. print.
ISSN: 0144-8463 (ISSN print).
DT Article
General Review; (Literature Review)
LA English
ED Entered STN: 25 Dec 2002
Last Updated on STN: 25 Dec 2002
AB The induction of strong and long lasting T-cell response, CD4+ or CD8+, is a major requirement in the development of efficient vaccines. An important aspect involves delivery of antigens to dendritic cells (DCs) as antigen presenting cells (APCs) for the induction of potent antigen-specific CD8+ T lymphocyte (CTLs) responses. Protein or peptide-based vaccines become an attractive alternative to the use of live cell vaccines to stimulate CTL responses for the treatment of viral diseases or malignancies. However, vaccination with proteins or synthetic peptides representing discrete CTL epitopes have failed in most instances due to the inability for exogenous antigens to be properly presented to T cells via major histocompatibility complex (MHC) class I molecules. Modern vaccines, based on either synthetic or natural molecules, will be designed in order to target appropriately professional APCs and to co-deliver signals able to facilitate activation of DCs. In this review, we describe the recent findings in the development of lipid -based formulations containing a combination of these attributes able to deliver tumor- or viral-associated antigens to the cytosol of DCs. We present in vitro and pre-clinical studies reporting specific immunity to viral, parasitic infection and tumor growth.

L6 ANSWER 14 OF 18 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on

STN DUPLICATE 4

AN 2003:104441 BIOSIS
DN PREV200300104441
TI Attaching histidine-tagged peptides and proteins to lipid-based carriers through use of metal-ion-chelating lipids.
AU Chikh, Ghania G.; Li, Wai Ming; Schutze-Redelmeier, Marie-Paule; Meunier, Jean-Claude; Bally, Marcel B. [Reprint Author]
CS Department of Advanced Therapeutics, British Columbia Cancer Research Center, 600 West 10th Avenue, Vancouver, BC, V5Z 1L3, Canada
MBally@interchange.ubc.ca
SO Biochimica et Biophysica Acta, (23 December 2002) Vol. 1567, No. 1-2, pp. 204-212. print.
ISSN: 0006-3002 (ISSN print).
DT Article
LA English
ED Entered STN: 19 Feb 2003
Last Updated on STN: 19 Feb 2003
AB The therapeutic potential of selected peptides and proteins is enormous, with applications ranging from use as therapeutic vaccines, as modulators of intracellular signaling pathways and as highly selective agents capable of recognizing unique extracellular targets. We have been pursuing development of hybrid lipid-based carrier formulations designed to take advantage of the therapeutic benefits of peptides selected for their ability to act in a complementary fashion with the carrier system. In this regard, it is critical to have simple and versatile methods to promote and control the binding of diverse peptides to a broad range of carrier formulations. As demonstrated here, recombinant proteins and synthetic peptides containing poly-histidine residues (4 to 10) can be specifically bound to liposomes containing a metal-ion-chelating lipid, DOGS-NTA-Ni. The potential of this approach is demonstrated using two functional peptides, AntpHD-Cw3 (applications for vaccine production) and AHNP (specificity for Her-2 expressing cells).

L6 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
AN 2001:884155 CAPLUS
DN 136:165671
TI Efficient delivery of antennapedia homeodomain fused to CTL epitope with liposomes into dendritic cells results in the activation of CD8+ T cells
AU Chikh, Ghania G.; Kong, Spencer; Bally, Marcel B.; Meunier, Jean-Claude; Schutze-Redelmeier, Marie-Paule M.
CS Systemic Therapy Program, Department of Advanced Therapeutics, British Columbia Cancer Research Centre, Vancouver, BC, V5Z 1L3, Can.
SO Journal of Immunology (2001), 167(11), 6462-6470
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
AB The in vivo induction of a CTL response using Antennapedia homeodomain (AntpHD) fused to a poorly immunogenic CTL epitope requires that the Ag is given in presence of SDS, an unacceptable adjuvant for human use. In the present report, we developed a hybrid CTL epitope delivery system consisting of AntpHD peptide vector formulated in liposomes as an alternative approach to bypass the need for SDS. It is proposed that liposomes will prevent degradation of the Ag in vivo and will deliver AntpHD recombinant peptide to the cytosol of APCs. We show in this work that dendritic cells incubated with AntpHD-fused peptide in liposomes can present MHC class I-restricted peptide and induce CTL response with a minimal amount of Ag. Intracellular processing studies have shown that encapsulated AntpHD recombinant peptide is endocytized before entering the cytosol, where it is processed by the proteasome complex. The processed liposomal peptides are then transported to the endoplasmic reticulum. The increase of the CTL response induced by AntpHD-fused peptide in liposomes correlates with this active

transport to the class I-processing pathway. In vivo studies demonstrated that pos. charged liposomes increase the immunogenicity of AntpHD-Cw3 when injected s.c. in mice in comparison to SDS. Moreover, addition of CpG oligodeoxynucleotide immunostimulatory sequences further increase the CD8+ T cell response. This strategy combining lipid -based carriers with AntpHD peptide to target poorly immunogenic Ags into the MHC class I processing pathway represents a novel approach for CTL vaccines that may have important applications for development of cancer vaccines.

RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 16 OF 18 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

AN 2001:468699 BIOSIS

DN PREV200100468699

TI Efficient CTL priming in mice by liposomal vaccine: Liposomes deliver exogenous recombinant protein into the MHC class I processing pathway.

AU Chikh, Ghania [Reprint author]; Bally, Marcel B. [Reprint author]; Redelmeier, Marie-Paule [Reprint author]

CS British Columbia Cancer Research Center, Vancouver, BC, Canada

SO Proceedings of the American Association for Cancer Research Annual Meeting, (March, 2001) Vol. 42, pp. 276. print.
Meeting Info.: 92nd Annual Meeting of the American Association for Cancer Research. New Orleans, LA, USA. March 24-28, 2001.
ISSN: 0197-016X.

DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 3 Oct 2001
Last Updated on STN: 23 Feb 2002

L6 ANSWER 17 OF 18 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 6

AN 2001:357625 BIOSIS

DN PREV200100357625

TI Characterization of hybrid CTL epitope delivery systems consisting of the Antennapedia homeodomain peptide vector formulated in liposomes.

AU Chikh, Ghania; Bally, Marcel; Schutze-Redelmeier, Marie-Paule [Reprint author]

CS Systemic Therapy Program, Advanced Therapeutics, British Columbia Cancer Agency, 600 West 10th Avenue, Vancouver, BC, V5Z 1L3, Canada
mpredelm@bccancer.bc.ca

SO Journal of Immunological Methods, (1 August, 2001) Vol. 254, No. 1-2, pp. 119-135. print.
CODEN: JIMMBG. ISSN: 0022-1759.

DT Article

LA English

ED Entered STN: 2 Aug 2001
Last Updated on STN: 19 Feb 2002

AB Peptide carriers, such the homeodomain of Antennapedia molecule (AntpHD), which spontaneously cross cellular membranes, have been exploited to deliver antigenic peptide Cw3 to the major histocompatibility complex (MHC) class-I presentation pathway and to prime cytotoxic T cells (CTL). However, the in vivo use of AntpHD recombinant peptide has been limited because CTLs can only be primed in the presence of sodium dodecyl sulfate (SDS) as adjuvant. In this report, we have exploited liposomes to protect the AntpHD-Cw3 from serum degradation and to facilitate the delivery of the recombinant peptide into the MHC class-I pathway of antigen-presenting cells. We have demonstrated that AntpHD recombinant peptide spontaneously associates with liposomes and this association is stable in vitro. However, exchange studies assessing the transfer of the peptide to model membranes or cells in vitro indicates

that approximately 50% of the liposome-associated peptide is readily exchangeable. This is consistent with trypsin-protection assays, which have shown that approximately 40% of the liposome -associated peptide is protected from hydrolysis. Importantly, macrophages and dendritic cells are able to internalize AntpHD recombinant peptide associated with liposomes resulting in efficient delivery of the CTL peptide into the cytosol. These studies have demonstrated that dendritic cells treated with AntpHD-Cw3 in liposomes sensitize CTL clones to lyse syngeneic target cells expressing Cw3 epitope. This strategy, which combines liposomes and a peptide vector, provides a new approach for introducing molecules into the MHC class-I antigen presentation pathway of dendritic cells.

L6 ANSWER 18 OF 18 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2000:238852 BIOSIS
DN PREV200000238852
TI Lipid-based peptide delivery to dendritic cells: Applications to cancer vaccines.
AU Chikh, G. [Reprint author]; Bally, M. B. [Reprint author]; Redelmeier-Schutze, M.-P. [Reprint author]
CS BC Cancer Agency, Vancouver, BC, Canada
SO Proceedings of the American Association for Cancer Research Annual Meeting, (March, 2000) No. 41, pp. 519. print.
Meeting Info.: 91st Annual Meeting of the American Association for Cancer Research. San Francisco, California, USA. April 01-05, 2000.
ISSN: 0197-016X.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 7 Jun 2000
Last Updated on STN: 5 Jan 2002

=> e redelmeier schutze/au
E1 1 REDELMEIER MARIE PAULE/AU
E2 1 REDELMEIER ROBERT J/AU
E3 0 --> REDELMEIER SCHUTZE/AU
E4 1 REDELMEIER SCHUTZE M P/AU
E5 12 REDELMEIER T/AU
E6 56 REDELMEIER T E/AU
E7 9 REDELMEIER THOMAS/AU
E8 17 REDELMEIER THOMAS E/AU
E9 1 REDELMEIER TOM/AU
E10 5 REDELMEIER TOM E/AU
E11 1 REDELMEIER TOM ERIC/AU
E12 2 REDELMEIR D/AU

=> s e4
L7 1 "REDELMEIER SCHUTZE M P"/AU

=> d bib ab

L7 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2000:238852 BIOSIS
DN PREV200000238852
TI Lipid-based peptide delivery to dendritic cells: Applications to cancer vaccines.
AU Chikh, G. [Reprint author]; Bally, M. B. [Reprint author]; Redelmeier-Schutze, M.-P. [Reprint author]
CS BC Cancer Agency, Vancouver, BC, Canada
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Meeting Info.: 91st Annual Meeting of the American Association for Cancer

Research. San Francisco, California, USA. April 01-05, 2000.
ISSN: 0197-016X.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LA English
ED Entered STN: 7 Jun 2000
Last Updated on STN: 5 Jan 2002

=> s liposom? and metal? and covalent and antennapedia
L8 288 LIPOSOM? AND METAL? AND COVALENT AND ANTENNAPEDIA

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9 288 DUP REM L8 (0 DUPLICATES REMOVED)

=> d kwic

L9 ANSWER 1 OF 288 USPATFULL on STN
SUMM . . . domain operatively coupled to the integrase having a non-native protein binding site. Operatively couple includes, but is not limited to, covalent coupling and genetic fusions where the domain is encoded in the nucleic acid encoding the integrase. The polynucleotide is capable. . .
SUMM . . . Such a polynucleotide may be comprised in a polynucleotide delivery vehicle. The polynucleotide delivery vehicle may be a virus, a liposome, a plasmid protein complex, a plasmid, or other polynucleotide delivery vehicle known in the art. A viral polynucleotide delivery vehicle. . .
DETD . . . finger binding proteins which, as is well known in the art, bind to target nucleic acid sequences via α-helical zinc metal atom coordinated binding motifs known as zinc fingers. Each zinc finger in a zinc finger nucleic acid binding protein is. . .
DETD . . . classified as DNA-binding proteins with a helix-turn-helix structural design, including, but not limited to, MAT 1, MAT 2, MAT a1, Antennapedia, Ultrabithorax, Engrailed, Paired, Fushi tarazu, HOX, Unc86, and the previously noted Oct1, Oct2 and Pit; zinc finger proteins, such as. . .
DETD . . . leukemia virus, simian virus (SV40), feline leukemia virus, Friend leukemia virus, bovine leukemia virus, herpesvirus (including Epstein-Barr virus); polyomavirus; papillomavirus; liposomes; naked DNA; and other viral and non-viral delivery vectors. The present technology can also be adapted to both transposable and. . .
DETD . . . to genetic manipulation and introduction heterologous DNA according to well known methods, including but not limited to electroporation, particle bombardment, liposomes, receptor-mediated endocytosis, polyethylene glycol mediated transformation and other methods for transfection and transformation. Selection techniques and markers, where desired, are. . .
DETD Exemplary methods for cross-linking peptides or polypeptides to liposomes are described in U.S. Pat. Nos. 5,603,872 and 5,401,511, each specifically incorporated herein by reference in its entirety. Various ligands can be covalently bound to liposomal surfaces through the cross-linking of amine residues. Liposomes , in particular, multilamellar vesicles (MLV) or unilamellar vesicles such as microemulsified liposomes (MEL) and large unilamellar liposomes (LUVET), each containing phosphatidylethanolamine (PE), have been prepared by established procedures. The inclusion of PE in the liposome provides an active functional residue, a primary amine, on the liposomal surface for cross-linking purposes. Ligands such as epidermal growth factor (EGF) have been successfully linked with PE-liposomes. Ligands are bound covalently to discrete sites on the liposome surfaces. The number and surface density of these sites are dictated by the

liposome formulation and the liposome type. The liposomal surfaces may also have sites for non-covalent association. To form covalent conjugates of ligands and liposomes, cross-linking reagents have been studied for effectiveness and biocompatibility. Cross-linking reagents include glutaraldehyde (GAD), bifunctional oxirane (OXR), ethylene glycol diglycidyl. . . preferably 1-ethyl-3-(3-dimethylaminopropyl) carbodiimide (EDC). Through the complex chemistry of cross-linking, linkage of the amine residues of the recognizing substance and liposomes is established.

DETD . . . al., 1990; DEAE dextran (Gopal, et al., 1985), electroporation (Tur-Kaspa et al., 1986; Potter et al., 1984), direct microinjection, DNA-loaded liposomes and lipofectamine-DNA complexes, cell sonication, gene bombardment using high velocity microprojectiles, and receptor-mediated transfection (Wu and Wu, 1987; Wu and. . .

DETD In a further embodiment of the invention, the expression construct may be entrapped in a liposome. Liposome-mediated nucleic acid delivery and expression of foreign DNA in vitro has been very successful. Wong et al. (1980) demonstrates the feasibility of liposome-mediated delivery and expression of foreign DNA in cultured chick embryo, HeLa, and hepatoma cells. Nicolau et al. (1987) accomplished successful liposome-mediated gene transfer in rats after intravenous injection.

DETD . . . with FIV exons present within exons

Refseq	Gene name	Gene ontology
NM_004194	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), transcript variant 4, mRNA	integral to membrane; integrin binding; metalloendopeptidase activity; negative regulation of cell adhesion; proteolysis and peptidolysis
NM_014614	proteasome (prosome, macropain) activator	

. . .

CLM What is claimed is:

27. The polynucleotide of claim 26, wherein the polynucleotide delivery vehicle is a virus, a liposome, a plasmid protein complex, or a plasmid.

=> d

L9 ANSWER 1 OF 288 USPATFULL on STN

AN 2006:181844 USPATFULL

TI Compositions and methods related to modified retroviral vectors for restricted, site specific integration

IN McCray, Paul B. JR., Iowa City, IA, UNITED STATES
Sinn, Patrick L., Iowa City, IA, UNITED STATES
Voytas, Daniel F., Ames, IA, UNITED STATES
Dai, Junbiao, Ames, IA, UNITED STATES

PA IOWA STATE UNIVERSITY RESEARCH FOUNDATION, INC. (U.S. corporation)
UNIVERSITY OF IOWA RESEARCH FOUNDATION (U.S. corporation)

PI US 2006154240 A1 20060713

AI US 2005-317330 A1 20051222 (11)

PRAI US 2004-638590P 20041222 (60)

DT Utility

FS APPLICATION

LN.CNT 3722

INCL INCLM: 435/005.000
INCLS: 435/199.000; 435/325.000; 435/456.000

NCL NCLM: 435/005.000

NCLS: 435/199.000; 435/325.000; 435/456.000
IC IPCI C12Q0001-70 [I,A]; C12N0009-22 [I,A]; C12N0015-867 [I,A]